4. (amended) A semiconductor laser module, comprising a semiconductor laser; a driving circuit for driving said semiconductor laser; a heating element for controlling temperature of said semiconductor laser; a temperature sensor for sensing temperature near or around said semiconductor laser and said heating element; and a temperature control unit for controlling said heating element on the basis of temperature information from said temperature sensor, wherein

said temperature control unit controls said heating element to heat without cooling so as to keep said semiconductor laser at the same temperature as ambient air temperature or higher .

10. (amended) A semiconductor laser module according to claim 9, wherein said semiconductor laser module has no Peltier cooler.

17. (amended) A semiconductor laser module, comprising: a semiconductor laser; a driving circuit for driving said semiconductor laser; a heating element for controlling temperature of said semiconductor laser without providing cooling; a temperature sensor for sensing temperature near or around said semiconductor laser and said heating element; a temperature control unit for controlling said heating element on the basis of temperature information from said temperature sensor; and a supporting substrate, wherein

at least said semiconductor laser, said heating element and said temperature sensor are mounted on a main surface of said supporting substrate, wherein

a main surface of a semiconductor chip of said semiconductor laser, on which joining for emitting laser light has been formed, is disposed on said main surface of said supporting substrate, wherein

said heating element is disposed in proximity to said joining on said main surface of said semiconductor chip of said semiconductor laser on said main surface of said supporting substrate, and wherein